

OPINION 2123 (Case 999)**F.A. Quenstedt's trinominal nomenclature (1845–1888): usage of the third names of ammonites stabilized and 34 important Quenstedt names of ammonites placed on the Official List of Specific Names in Zoology (Cephalopoda, Ammonoidea)**

Abstract. The Commission has ruled that all Quenstedt's third names in the nominal genus *Ammonites* are subspecific in rank and are therefore available names in the species-group and that seven such third names that are junior homonyms, but are type species of genera or indices of standard chronostratigraphic Zones or Subzones, are not invalid by reason of being junior homonyms. These seven names, together with 27 other Quenstedt second and third names that are in current use as important zonal or subzonal index fossils or as type species of ammonite genera and that are not preoccupied, are placed on the Official List of Specific Names in Zoology.

Keywords. Nomenclature; taxonomy; F.A. Quenstedt; trinominal nomenclature; ammonites; Jurassic.

Ruling

- (1) Under the plenary power it is hereby ruled that:
 - (a) all the third names published in combination with the genus *Ammonites* by Quenstedt in three works (1845–49; 1856–57; 1882–88) are subspecific names of the species-group, have availability and status dating from Quenstedt's first usage, and can be raised to full specific rank under the Principle of Coordination (Article 46) where such action is considered to be appropriate;
 - (b) the following third names are not invalid by reason of being junior homonyms:
 - (1) *albus*, *Ammonites anceps*, Quenstedt, 1857;
 - (2) *anceps*, *Ammonites contractus*, Quenstedt, 1886;
 - (3) *bifurcatus*, *Ammonites bplex*, Quenstedt, 1846;
 - (4) *macer*, *Ammonites humphriesianus*, Quenstedt, 1886;
 - (5) *numismalis*, *Ammonites heterophyllus*, Quenstedt, 1845;
 - (6) *obtusus*, *Ammonites murchisonae*, Quenstedt, 1846;
 - (7) *ovalis*, *Ammonites sowerbyi*, Quenstedt, 1886.
- (2) The following names are hereby placed on the Official List of Specific Names in Zoology:
 - (a) *albus*, *Ammonites anceps*, Quenstedt, 1857 (specific name of the type species of *Ilovaikioceras* Sazonov, 1960);
 - (b) *anceps*, *Ammonites contractus*, Quenstedt, 1886 (specific name of the type species of *Epalxites* Mascke, 1907);
 - (c) *arenatus*, *Ammonites*, Quenstedt, 1886 (specific name of the type species of *Prepapillites* Buckman, 1927);

- (d) *baculatus*, *Ammonites*, Quenstedt, 1857 (specific name of the type species of *Baculatoceras* Mascke, 1907);
- (e) *bidentosus*, *Ammonites*, Quenstedt, 1857 (specific name of the type species of *Trochiskioceras* Schairer & Schlamp, 1991);
- (f) *bifer*, *Ammonites*, Quenstedt, 1843 (specific name of the type species of *Bifericeras* Buckman, 1913);
- (g) *bifurcatus*, *Ammonites biplex*, Quenstedt, 1846 (specific name of the type species of *Divisosphinctes* Beurlen, 1925);
- (h) *binammatus*, *Ammonites*, Quenstedt, 1857 (specific name of the type species of *Epipeltoceras* Spath, 1924);
- (i) *biruncinatus*, *Ammonites*, Quenstedt, 1847 (specific name of the type species of *Simoceras* Zittel, 1870);
- (j) *circumspinosus*, *Ammonites inflatus*, Quenstedt, 1857 (senior subjective synonym of *Ammonites circumspinosus* Opperl, 1863; specific name of the type species of *Physodoceras* Hyatt, 1900);
- (k) *confusus*, *Ammonites*, Quenstedt, 1856 (specific name of the type species of *Microceras* Hyatt, 1867);
- (l) *fasciatus*, *Ammonites*, Quenstedt, 1848 (specific name of the type species of *Lytogyroceras* Spath, 1925);
- (m) *ibex*, *Ammonites*, Quenstedt, 1843;
- (n) *involutus*, *Ammonites*, Quenstedt, 1846 (specific name of the type species of *Involuticeras* Salfeld, 1913);
- (o) *laqueus*, *Ammonites*, Quenstedt, 1856;
- (p) *latisulcatus*, *Ammonites*, Quenstedt, 1883 (specific name of the type species of *Epammonites* Spath, 1922);
- (q) *longidens*, *Ammonites parkinsoni*, Quenstedt, 1886 (specific name of the type species of *Odontolkites* Buckman, 1925);
- (r) *macer*, *Ammonites humphriesianus*, Quenstedt, 1886 (specific name of the type species of *Skirroceras* Mascke, 1907);
- (s) *microbiplex*, *Ammonites*, Quenstedt, 1887 (specific name of the type species of *Microbiplices* Arkell, 1936);
- (t) *nodostrictus*, *Ammonites*, Quenstedt, 1885 (specific name of the type species of *Holcolytoceras* Spath, 1924);
- (u) *nodulatus*, *Ammonites*, Quenstedt, 1888 (specific name of the type species of *Presimoceras* Sarti, 1990);
- (v) *numismalis*, *Ammonites heterophyllus*, Quenstedt, 1845 (specific name of the type species of *Tragophylloceras* Hyatt, 1900);
- (w) *obtusus*, *Ammonites murchisonae*, Quenstedt, 1846 (specific name of the type species of *Cosmogyrria* Buckman, 1898);
- (x) *ovalis*, *Ammonites sowerbyi*, Quenstedt, 1886;
- (y) *parinodus*, *Ammonites striatus*, Quenstedt, 1884 (specific name of the type species of *Parinodiceras* Trueman, 1918);
- (z) *pettos*, *Ammonites*, Quenstedt, 1843 (specific name of the type species of *Coeloceras* Hyatt, 1867);
- (aa) *planarmatus*, *Ammonites*, Quenstedt, 1856 (specific name of the type species of *Parahyperderoceras* Schlatter, 1980);

- (bb) *ruqa*, *Ammonites armatus*, Quenstedt, 1884 (specific name of the type species of *Hyperderoceras* Spath, 1926);
- (cc) *septenarius*, *Ammonites*, Quenstedt, 1857 (specific name of the type species of *Ceratosphinctes* Ziegler, 1959);
- (dd) *spiratissimus*, *Ammonites*, Quenstedt, 1851 (specific name of the type species of *Vermiceras* Hyatt, 1889);
- (ee) *tegulatus*, *Ammonites pictus*, Quenstedt, 1887 (specific name of the type species of *Taramelliceras* (*Strebliticeras*) Hölder, 1955);
- (ff) *tortus*, *Ammonites lineatus*, Quenstedt, 1885 (specific name of the type species of *Derolytoceras* Rosenberg, 1909);
- (gg) *transversarius*, *Ammonites*, Quenstedt, 1847 (specific name of the type species of *Gregoryceras* Spath, 1924);
- (hh) *unispinosus*, *Ammonites athleta*, Quenstedt, 1847 (specific name of the type species of *Unipeltoceras* Jeannet, 1951).

History of Case 999

An application to stabilize the usage of the third names of a number of ammonites established by F.A. Quenstedt (1845–1888) and to place 34 of his species-group names on the Official List was received from John H. Callomon and Desmond T. Donovan (*University College London, Gower Street, London WC1E 6BT, U.K.*) and Michael K. Howarth (*Natural History Museum, Cromwell Road, London SW7 5BD, U.K.*) on 14 December 2003.

The case was originally sent to the Commission's Secretary by Professor Dr Helmut Hölder (then at the Institute and Museum of Geology and Palaeontology, University of Tübingen, Germany) on 12 July 1955. Following correspondence, Professor Hölder outlined the problem in a paper published in *Paläontologische Zeitschrift* (Hölder, 1958). Hölder's proposals were never considered by the Commission for a number of reasons, including the intensive work then being done in formulating what was to become the first International Code of Zoological Nomenclature in 1961. Later Hölder (1972) stated that his proposals of 1958 were no longer entirely appropriate.

Provisions of the current (fourth) Edition of the Code enabled the case to be considered under Article 45.6.4. After correspondence the case was published in BZN 61: 11–18 (March 2004). A general account of Quenstedt's system of trinomial nomenclature as applied to ammonites was published in 2004 by Callomon, Donovan & Howarth (*Palaeontology*, 47(4): 1063–1073). The title, abstract and keywords of the case were published on the Commission's website. No comments on this case were received.

Decision of the Commission

On 1 March 2005 the members of the Commission were invited to vote on the proposals published in BZN 61: 16–18. At the close of the voting period on 1 June 2005 the votes were as follows:

Affirmative votes — 16 + 2 split votes: Alonso-Zarazaga, Bock, Bouchet, voted FOR (1)(a), (1)(b) (3), (1)(b) (7), (2)(a), (2)(b), (2)(g), (2)(r), (2)(v), (2)(w), Brothers, Calder, Fortey, Halliday, Kerzhner: (1)(b) (1), (1)(b) (3), (1)(b) (4), (1)(b) (5), (1)(b) (6), (1)(b) (7), Lamas, Macpherson, Mahnert, Mawatari, Minelli, Nielsen, Papp, Patterson, Rosenberg and van Tol.

Negative votes — 2 split votes: Bouchet: (1)(b)(1), (1)(b) (2), (1)(b) (4), (1)(b) (5), (1)(b) (6), and Kerzhner: (1)(a), (2)(a), (2)(b) (2)(c), (2)(d), (2)(e), (2)(f), (2)(g), (2)(h), (2)(i), (2)(j), (2)(k), (2)(l), (2)(m), (2)(n), (2)(o), (2)(p), (2)(q), (2)(r), (2)(s), (2)(t), (2)(u), (2)(v), (2)(w), (2)(x), (2)(y), (2)(z), (2)(aa), (2)(bb), (2)(cc), (2)(dd), (2)(ee), (2)(ff), (2)(gg), (2)(hh).

Bouchet abstained on (2)(c), (2)(d), (2)(e), (2)(f), (2)(h), (2)(i), (2)(j), (2)(k), (2)(l), (2)(m), (2)(n), (2)(o), (2)(p), (2)(q), (2)(s), (2)(t), (2)(u), (2)(x), (2)(y), (2)(z), (2)(aa), (2)(bb), (2)(cc), (2)(dd), (2)(ee), (2)(ff), (2)(gg), (2)(hh), Kerzhner abstained on (1)(b) (2) and Štys abstained.

No votes were received from Böhme, Ng and Song.

Bouchet commented that 'it is refreshing to see that the Commission can finally take action on problems that have remained in limbo for decades. However, I feel that the proposals for voting confusingly mix three different issues: (1) to confirm the availability of Quenstedt's 'third names'; this is proposal 1(a) and I unequivocally vote FOR it; (2) to declare that 7 such 'third names' are not invalid by reason of being junior homonyms; I vote FOR the conservation of the two names (*bifurcatus* and *ovalis*) that are index species of standard chronostratigraphic Zones, because application of the Principle of Homonymy would cause disruption outside the small world of systematics. However, the other five 'third names' in List A are 'merely' types of genera. The application does not contain evidence that application of the Principle of Homonymy (i.e., declaring these names nomenclaturally invalid) would cause confusion outside the world of ammonite systematics and what would be the magnitude of the confusion or what is the current level of usage of these names. Therefore, I vote AGAINST exempting these 5 names from the Principle of Homonymy. (3) Finally there are the 22 names in List C, which are standard specific epithets and are not junior homonyms. I see no reason, other than 'housekeeping', to place them on the Official List. I abstain on this action.

Kerzhner commented, voting for (1)(b) (1, 3–7), except for *anceps*, which is not threatened by secondary homonymy (Article 59.2). Voting against (1)(a) he commented that Article 45.6.4 of the Code is badly worded and confusing, but it does not follow from it that Quenstedt's third names are infrasubspecific and require special ruling for their conservation and against (2): it is useless to place on Official Lists names for which no ruling is made.

Abstaining, Štys commented: 'in principle I would agree with the proposals, but would have preferred postponing the vote because (1) if F.A. Quenstedt's trinominal nomenclature of ammonites is that big a problem for palaeontologists, as the authors suggest, I wonder why nobody commented; (2) names included in the List A (para. 5) should not be automatically accepted as subspecific and valid unless the effect of such an action for their senior homonyms was stated and explained case by case; (3) I fail to understand fully the differences between Lists B and C, according to the explanation given in the introductory text the lists should grossly overlap'.

Original references

The following are the original references to the names placed on an Official List by the ruling given in the present Opinion:

- (a) *albus*, *Ammonites anceps*, Quenstedt, 1857, *Der Jura*, p. 617.

- (b) *anceps*, *Ammonites contractus*, Quenstedt, 1886, *Die Ammoniten des Schwäbischen Jura*, p. 521.
- (c) *arenatus*, *Ammonites*, Quenstedt, 1886, *Die Ammoniten des Schwäbischen Jura*, II, *Der Braune Jura*, p. 482.
- (d) *baculatus*, *Ammonites*, Quenstedt, 1857, *Der Jura*, p. 402.
- (e) *bidentosus*, *Ammonites*, Quenstedt, 1857, *Der Jura*, p. 616.
- (f) *bifer*, *Ammonites*, Quenstedt, 1843, *Das Flözgebirge Württembergs*, p. 160.
- (g) *bifurcatus*, *Ammonites biplex*, Quenstedt, 1846, *Petrefactenkunde Deutschlands. Die Cephalopoden*, p. 163.
- (h) *bimammatus*, *Ammonites*, Quenstedt, 1857, *Der Jura*, p. 616.
- (i) *biruncinatus*, *Ammonites*, Quenstedt, 1847, *Petrefactenkunde Deutschlands. Die Cephalopoden*, p. 260.
- (j) *circumspinosus*, *Ammonites inflatus*, Quenstedt, 1857, *Der Jura*, p. 609.
- (k) *confusus*, *Ammonites*, Quenstedt, 1856, *Der Jura*, p. 127.
- (l) *fasciatus*, *Ammonites*, Quenstedt, 1848, *Petrefactenkunde Deutschlands. Die Cephalopoden*, p. 271.
- (m) *ibex*, *Ammonites*, Quenstedt, 1843, *Das Flözgebirge Württembergs*, p. 179.
- (n) *involutus*, *Ammonites*, Quenstedt, 1846, *Petrefactenkunde Deutschlands. Die Cephalopoden*, p. 165.
- (o) *laqueus*, *Ammonites*, Quenstedt, 1856, *Der Jura*, p. 43.
- (p) *latisulcatus*, *Ammonites*, Quenstedt, 1883, *Die Ammoniten des Schwäbischen Jura*, p. 85.
- (q) *longidens*, *Ammonites parkinsoni*, Quenstedt, 1886, *Die Ammoniten des Schwäbischen Jura*, II, *Der Braune Jura*, p. 592.
- (r) *macer*, *Ammonites humphriesianus*, Quenstedt, 1886, *Die Ammoniten des Schwäbischen Jura*, II, *Der Braune Jura*, p. 528.
- (s) *microbiplex*, *Ammonites*, Quenstedt, 1887, *Die Ammoniten des Schwäbischen Jura*, p. 876.
- (t) *nodostrictus*, *Ammonites*, Quenstedt, 1885, *Die Ammoniten des Schwäbischen Jura*, p. 264.
- (u) *nodulatus*, *Ammonites*, Quenstedt, 1888, *Die Ammoniten des Schwäbischen Jura*, p. 981.
- (v) *numismalis*, *Ammonites heterophyllus*, Quenstedt, 1845, *Petrefactenkunde Deutschlands. Die Cephalopoden*, p. 100.
- (w) *obtusus*, *Ammonites murchisonae*, Quenstedt, 1846, *Petrefactenkunde Deutschlands. Die Cephalopoden*, p. 116.
- (x) *ovalis*, *Ammonites sowerbyi*, Quenstedt, 1886, *Die Ammoniten des Schwäbischen Jura*, II, *Der Braune Jura*, p. 488.
- (y) *parinodus*, *Ammonites striatus*, Quenstedt, 1884, *Die Ammoniten des Schwäbischen Jura*, I, *Der Schwarze Jura (Lias)*, p. 227.
- (z) *pettos*, *Ammonites*, Quenstedt, 1843, *Das Flözgebirge Württembergs*, p. 178.
- (aa) *planarmatus*, *Ammonites*, Quenstedt, 1856, *Der Jura*, p. 153.
- (bb) *ruga*, *Ammonites armatus*, Quenstedt, 1884, *Die Ammoniten des Schwäbischen Jura*, I, *Der Schwarze Jura (Lias)*, p. 206.
- (cc) *septenarius*, *Ammonites*, Quenstedt, 1857, *Der Jura*, p. 614.
- (dd) *spiratissimus*, *Ammonites*, Quenstedt, 1851, *Handbuch der Petrefactenkunde*, p. 355.

- (ee) *tegulatus*, *Ammonites pictus*, Quenstedt, 1887, *Die Ammoniten des Schwäbischen Jura*, III, *Der Weisse Jura*, p. 1051.
- (ff) *tortus*, *Ammonites lineatus*, Quenstedt, 1885, *Die Ammoniten des Schwäbischen Jura*, I, *Der Schwarze Jura (Lias)*, p. 309.
- (gg) *transversarius*, *Ammonites*, Quenstedt, 1847, *Petrefactenkunde Deutschlands. Die Cephalopoden*, p. 199.
- (hh) *unispinosus*, *Ammonites athleta*, Quenstedt, 1847, *Petrefactenkunde Deutschlands. Die Cephalopoden*, p. 190.